

**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION
APRIL 20, 2000 EXECUTIVE OFFICER'S REPORT**

MEADERS CLEANERS (Ron S. Falkowski)

In 1987, Desert Water Agency (DWA) found contamination of Tetrachloroethene and Trichloroethene, commonly known as PCE and TCE respectively, in two of their wells, DWA No. 2 and DWA No. 6. In 1995, DWA conducted a soil gas investigation that led to the contamination source - a property at 711 Palm Canyon Drive. The property is occupied by several businesses including Meaders Cleaners, a dry cleaning facility that had been operating at the site since 1969, utilizing PCE and TCE in its dry cleaning process and used an onsite septic system for wastewater disposal. In 1995 and 1996, consultants for Meaders Cleaners performed environmental investigations confirming PCE and TCE contamination in soils and groundwater at the site beneath the facility's septic system dry wells.

In 1996, the RWQCB issued the first Cleanup and Abatement Order, CAO 96-057, for the clean up of the site. CAO 96-057 was rescinded in 1997 with the issuance of CAO 97-145, which modified the original order. Only one CAO 97-145 condition, submittal of a Remedial Action Report, has been completed. Attorneys for the responsible parties (i.e., Landowner and Facility operator) are attempting to reach an agreement with insurance carriers to finance the clean up. An Administrative Civil Liability Complaint (ACLC) naming Meaders Cleaners and the property owner for failure to comply with CAO 97-145 and implement clean up may be necessary due to the lack of timely progress.

CHROMIUM POLLUTION IN REGION 7 PG&E TOPOCK STATION AND NEEDLES LANDFILL (Liann Chavez)

Two regulated facilities with chromium pollution are located within Region 7. They are the Pacific Gas and Electric (PG&E) Topock natural gas compressor station, located approximately 15 miles south of Needles, and the Needles Landfill, located approximately 2.5 miles east of Needles.

PG&E TOPOCK

From 1952 until 1967, the PG&E Topcock facility discharged blow-down cooling wastewater containing chromium-based corrosion inhibitors into a ravine adjacent to the towers, which overlooks the Colorado River, less than one mile to the southwest. In 1970, RWQCB issued Waste Discharge Requirements (WDRs) for discharge of cooling tower blow-down wastewater into unlined surface impoundments. These two former disposal practices have resulted in the creation of a plume of Cr (VI) contaminated groundwater beneath the site, which has migrated in the subsurface toward the Colorado River. In 1983, the Department of Health Services determined hexavalent chromium (Cr (VI)) to be a hazardous substance. In 1985, PG&E replaced the chromium-based inhibitors with phosphate-based inhibitors, currently in use today. This wastewater is discharged into triple lined ponds under WDR 98-050. Regional Board staff is working closely with Department of Toxic Substances Control (DTSC, lead environmental regulatory agency for hazardous site mitigation) staff to expedite characterization of the groundwater contaminant plume and implement corrective action.

NEEDLES LANDFILL

The Needles Landfill operated from 1967-1994, and has been regulated by RWQCB since 1972. From 1973-1983, approximately 160,000 gallons of chromic hydroxide sludge from the PG&E Topock facility was disposed of at the landfill. In 1983, the Department of Health Services (DHS) found the chromic hydroxide sludge to be a hazardous material, and ordered the disposal to the landfill ceased. In 1989, a Solid Waste Assessment Test (SWAT) was completed at the landfill. Chromium was not detected in the groundwater monitoring wells installed for the SWAT, and has not been detected at significant concentrations during ongoing monitoring since then. In 1997, pursuant to Closure WDR 97-050, the landfill was capped and RWQCB closure certification is dependent on finalization of a land transfer agreement between the Bureau of Land Management and San Bernardino County. Pursuant to regulations, the landfill operators will be required to perform post-closure maintenance and groundwater monitoring for 30 years.

NAVAL AIR FACILITY EL CENTRO (NAF EL CENTRO) (Joan Stormo)

Robert Perdue and Joan Stormo recently were invited to attend an awards ceremony on April 25, 2000, at the Pentagon. The ceremony will honor the environmental clean up at NAF El Centro which our Regional Board has had extensive involvement in. The clean up focussed on soil and groundwater petroleum contamination from fuel spills, leaking underground storage tanks, and activities at fire fighting training facilities. Sites encompassed up to several acres and utilized innovative state of the art remedial technologies. In addition, NAF El Centro closed an inactive landfill, and remediated burn pits, sludge burial areas, scrap yards, storage areas, incinerators, and other hazardous waste sites.

CITY OF WESTMORLAND WASTEWATER TREATMENT PLANT UPGRADE (Rex Sharp)

In November 1999, the City of Westmorland was placed under a revised Time Schedule Order (TSO) to upgrade the wastewater treatment facility. The City is currently meeting the task completion dates outlined in the TSO. Bids for the upgrade were opened on April 6, 2000. Financing is in place to proceed with the project. The City is seeking Proposition 13 Grant Funding to help offset the cost to City residents. City representatives have stated that the effort to obtain Proposition 13 Grant Funding will not delay progress on the facility upgrade and they will continue to meet the task completion dates outlined in the TSO.

PROPOSED ADMINISTRATIVE CIVIL LIABILITY COMPLAINT TO THE CITY OF EL CENTRO (Rex Sharp)

Staff has prepared an Administrative Civil Liability Complaint (ACLC) for the potential issuance to the City of El Centro in response to three separate municipal wastewater incidences that involved noncompliance with Board Order No. 99-004 discharge requirements.

The first incident occurred on October 9 through October 11, 1999. A failure of the Ultra Violet (UV) disinfection system resulted in the discharge of 9.3 million gallons of non-disinfected effluent to the Central Main Drain.

The second incident occurred on November 6, 1999. Another failure of the UV disinfection system resulted in the discharge of 2.0 million gallons of non-disinfected effluent to the Central Main Drain.

The third incident occurred on March 2, 2000. The discharger submitted a report that a raw sewage spill of approximately 3,500 gallons occurred into the Dahlia Drain. The sewage spill occurred as a result of inadequate containment facilities during a construction tie-in to an existing sewer.

PROGRESS ON WASTEWATER TREATMENT PLANT PERMIT COMPLIANCE AT THE NAVAL AIR FACILITY (USNAF), EL CENTRO (Rex Sharp)

The United States Naval Air Facility in El Centro has secured emergency funding to install upgrades at the wastewater treatment plant to achieve discharge permit compliance. The emergency funding will be used to construct a flow equalization basin, install a sodium hypochlorite disinfection system, and install a dechlorination system. Work on the upgrades started this month and, with the exception of the flow equalization basin, will be finished by July 2000. The anticipated completion date of the equalization basin is September 2000.

In addition to the facility upgrades currently being installed, a consultant has completed a preliminary Design Report addressing additional treatment plant upgrades. The Design Report upgrades are designed to provide additional capacity as well as redundancy systems to provide back-up treatment capacity during times of system maintenance or failure, and include:

- the addition of a second oxidation ditch,
- the addition of two additional secondary clarifiers,
- the installation of sand filters for effluent filtering,
- increasing the size of the ultraviolet disinfection system, and
- increasing sludge drying capacity by constructing additional drying beds.

Design Report upgrades are anticipated to be completed between 2001 and 2003, contingent on available funding.

TOTAL MAXIMUM DAILY LOADS (TMDLs) (Summer Bundy)

In order to understand TMDLs, one must first have an understanding of Water Quality Standards (WQS). Water Quality Standards are comprised of two components: beneficial uses and water quality objectives (WQO). Beneficial uses and water quality objectives are contained in the Regional Water Quality Control Plans (Basin Plans). Beneficial uses include uses such as municipal or agricultural supply, contact recreation, and aquatic habitat. Water quality objectives (WQO) are either numeric or narrative and are established to be protective of beneficial uses.

Section 303(d)(A)(1) of the Clean Water Act requires the Regional Board to:

- identify the Region's surface waters that do not meet their water quality standards (these are referred to as impaired waters);
- rank the impaired waterbodies, taking into account factors including the severity of the pollution and the uses made of such waters; and
- establish TMDLs for those pollutants causing the impairments to ensure beneficial use attainment.

The ranked list of impaired waters is commonly referred to as the "303(d) List."

A Total Maximum Daily Load is the assimilative capacity of a waterbody for a pollutant. Another way of saying this is that a TMDL is the amount of a pollutant that a waterbody can receive and still meet its Water Quality Standards (including both beneficial uses and water quality objectives). Once the assimilative capacity of a waterbody is determined, that allowable load is allocated equitably to the various sources of the pollutant within the watershed. These sources can include point sources, such as municipal wastewater treatment facilities; nonpoint sources, such as agricultural or urban stormwater runoff; natural sources, such as wind and erosion; and a margin of safety to account for uncertainty in the analysis of the data, refer to Figure 1.

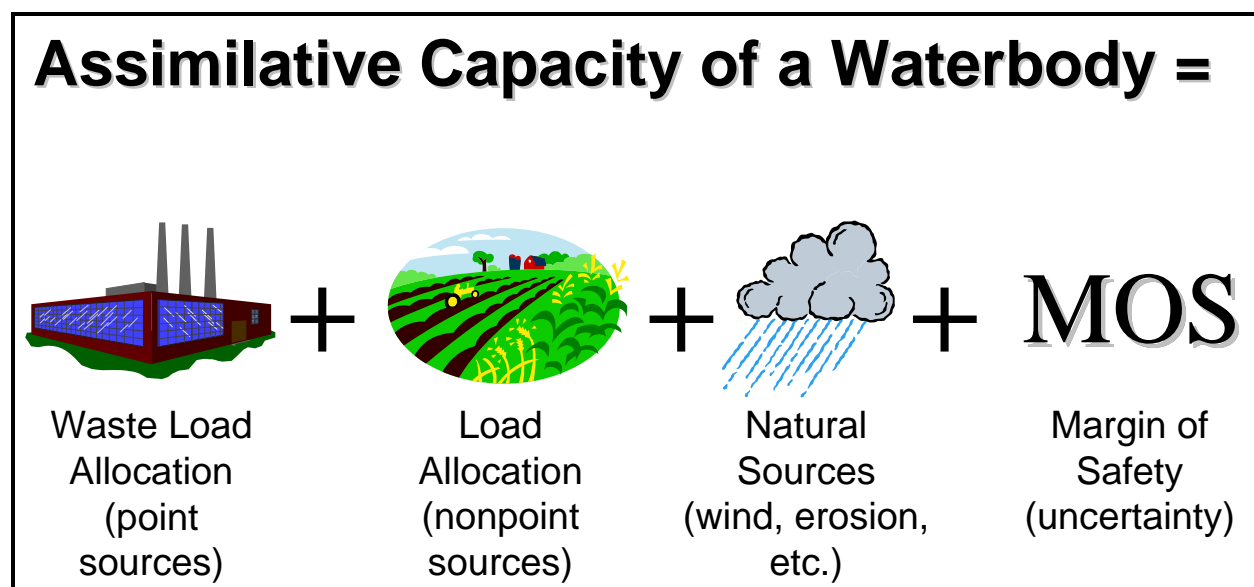


Figure 1. An illustration of Total Maximum Daily Loads

In addition to the federal Clean Water Act requirement to develop and adopt TMDLs, the development and implementation of TMDLs is consistent with the California Porter-Cologne Water Quality Control Act goal of protecting water quality. Development and implementation of TMDLs also is consistent with the State Water Resources Control Board's Strategic Plan, which has as its first goal to: "preserve and protect water quality while balancing environmental and economic impacts."

The Colorado River Basin Regional Water Quality Control Board first adopted its 303(d) List in 1996. The list was updated in January 1998 and is the list under which staff is currently operating. The Region's 303(d) List is shown in Table 1, located on the following page. In developing recommendations for the 303(d) List, staff evaluated several sources of data, including the State Water Resources Control Board's Toxic Substances Monitoring Program, which evaluates fish tissue for the presence of bioaccumulative pollutants; the Regional Board's Trend Monitoring Data, which is quarterly or annual data for monitoring stations throughout the region collected from 1980 through 1993; the Regional Board's monthly water quality data for the New River at the International Boundary; and special studies, including those performed by the U.S. Geological Survey and the U.S. Fish and Wildlife Service. Additional staff efforts toward TMDL development include analysis of the available data, and water quality monitoring activities to address data gaps.

The TMDL process is a public process. The interests and viewpoints of all stakeholders, including public and private agencies, environmental or other interest groups, landowners, and the public must be taken into consideration in the development of a TMDL and its implementation plan. In an effort to facilitate public involvement, Regional Board staff convened an advisory group (TMDL Technical Advisory Committee) in December 1998. The formation of this group was announced through Public Notices published in newspapers and posted in local Post Offices throughout the Region. Regional Board staff has attended meetings on nearly a monthly basis and have made informational presentations on topics including the Clean Water Act, the Regional Board Basin Plan, the State's Nonpoint Source Management Plan, and a variety of other topics. In addition, staff have prepared and distributed the agendas and the minutes for these meetings. Regional Board staff has also given TMDL informational presentations at a variety of forums, including University of California Agricultural Cooperative Extension Field Days.

A TMDL document is comprised of the following components: problem statement, numeric target, source analysis, linkage analysis, load and wasteload allocations (LAs and WLAs), monitoring plan, and implementation plan. Component purposes are described in Table 2. This fiscal year, Regional Board staff is working on two TMDL documents: Bacteria for the New River and Sedimentation/Siltation for the Alamo River. The draft TMDL documents and the Implementation Plans are being prepared, and will be released for Public Review and Comment in early May. Implementation Plans are being developed consistent with the State Nonpoint Source Management Plan and with significant public input from advisory committees. Basin Plan Amendments to adopt the two TMDLs is tentatively scheduled for the Regional Board's consideration at its June Board Meeting.

NEW RIVER BACTERIA TMDL (Beatrice Griffey)

The current New River water quality does not support beneficial uses designated in the Basin Plan: Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); Preservation of Rare, Threatened, and Endangered Species (RARE); Water Contact Recreation (REC I); Non-Contract Recreation (REC II); Industrial Service Supply (IND); and Freshwater Replenishment (FRSH). There are five 303(d) listed pollutants for the New River: bacteria, volatile organic compounds, silt, pesticides, and nutrients. RWQCB staff has recently completed the New River Bacteria TMDL document, which presently is being reviewed internally. As part of the bacteria TMDL process, in January staff commenced monthly water quality monitoring and sampling activities at twenty sampling stations to evaluate spatial and temporal fluctuations in bacteria concentrations and to ensure all significant bacteria sources are identified. Analytical results indicate the presence of a maximum fecal coliform concentration of 16,000,000 MPN/100 ml (Basin Plan Water Quality Objective 200 MPN/100 ml) and a maximum E. coli concentration of 330,000 MPN/100 ml (Basin Plan Water Quality Objective 126 MPN/100 ml). Additionally, analytical results indicate dramatic spatial and temporal fluctuations in bacteria concentrations.

Table 1. Colorado River Basin Regional Water Quality Control Board Section 303(d) List

Waterbody	Hydrologic Unit #	Size Affected	Problem Description	Specific Pollutants	Probable Source	TMDL Priority	Target Dates
New River	723.10	60 miles	Public health hazard, objectives violated, fish kills	Pesticides, silt, bacteria, nutrients, VOCs	Agricultural return flows and Mexico	high	<i>Silt:</i> Start 1998, complete 2002 <i>Bacteria:</i> Start 1998, complete 2005 ¹ <i>Nutrients:</i> Start 2002, complete 2010 <i>Pesticides:</i> Start 2002, complete 2013 <i>VOCs:</i> Start 2007, complete 2013
Alamo River	723.10	52 miles	Elevated fish tissue levels (pesticides and selenium), toxic bioassay results (pesticides), recreational impacts	Pesticides, selenium, silt	Agricultural return flows ²	high	<i>Silt:</i> Start 1998, complete 2000 <i>Selenium:</i> Start 2000, complete 2010 <i>Pesticide:</i> Start 2002, complete 2011
Imperial Valley Drains	723.10	1,305 miles	Elevated fish tissue levels (pesticides and selenium), toxic bioassay results (pesticides), recreational impacts	Pesticides, selenium, silt	Agricultural return flows ²	high	<i>Silt:</i> Start 1998, complete 2000 <i>Selenium:</i> Start 2000, complete 2010 <i>Pesticide:</i> Start 2005, complete 2011
Salton Sea	728.00	220,000 acres	Salinity objectives violated, elevated fish tissue levels (selenium), recreational impacts	Selenium, salt, nutrients	Agricultural return flows ²	medium	<i>Salt:</i> Start 1998, complete 2001 <i>Selenium:</i> Start 2002, complete 2007 <i>Nutrients:</i> Start 2002, complete 2010
Palo Verde Outfall Drain	715.40	16 miles	Bacteria objective violated, threat of toxic bioassay results, threat of sedimentation	Bacteria	Unknown	medium	<i>Bacteria:</i> Start 2005, complete 2011
Coachella Valley Stormwater Channel	719.47	20 miles	Bacteria objective violated, threat of toxic bioassay results	Bacteria	Unknown	Low	<i>Bacteria:</i> Start 2004, complete 2009

¹ Regional Board proposes to establish TMDL in cooperation with US EPA/Mexico.

² Selenium originates from upper portion of the Colorado River and is delivered to the Imperial Valley via irrigation water.

Table 2. Basic Technical TMDL Components

Component	Purpose
Problem Statement	Identifies the context for TMDL development and WQS issues that prompted TMDL development.
Numeric target	Identifies specific instream goals and endpoints for the TMDL, which ensure attainment of applicable WQS.
Source Analysis	Characterizes the amount of pollutants entering the receiving water from various sources (e.g., point, nonpoint, and natural sources of pollution).
Loading Capacity Linkage Analysis	Specifies the critical quantitative link between applicable WQS and the TMDL. Loading capacity reflects the amount of a pollutant that may be delivered to the waterbody and still achieve WQS.
TMDL, LAs, WLAs, Margin of Safety	Provides the calculations for total allowable loads and allocation of these loads among different sources such that applicable WQS are attained, while accounting for seasonal variation and uncertainty in the analysis of the data.
Monitoring Plan	Assesses TMDL implementation and effectiveness, and provides for TMDL adjustment as needed.
Implementation Plan	Specifies nonpoint source Best Management Practices, point source controls, and other actions necessary for TMDL implementation.

ALAMO RIVER SEDIMENTATION/SILTATION TMDL (Danny McClure)

The Alamo River is located in Imperial Valley, and is a subwatershed of the Salton Sea Transboundary Watershed. The watershed encompasses 450 square miles (280,000 acres), which is primarily utilized as highly productive irrigated agriculture lands. The watershed is located in the Sonoran Desert, which is characterized by high temperatures and extremely low levels of precipitation. The Alamo River is a natural channel that was created during the periodic flooding of the Colorado River into the Salton Basin. Today, however, the river is sustained by anthropogenic flows, with over 90% of the flow of the river comprised of agricultural return flows. The flow of the Alamo River at the International Boundary is 2 cubic feet per second (cfs). Per U.S.-Mexico agreements, a weir was constructed in the Alamo River upstream of the International Boundary (in Mexico) with the intent of controlling dry weather flows. Improper maintenance of the weir currently allows an average of 2 to 5 cfs to flow into the U.S. The Alamo River is approximately 60 miles long, draining about 900 miles of agricultural drains in the Imperial Valley. The flow of the River is controlled by 13 drop structures, which were installed by the U.S. Bureau of Reclamation to control flooding and erosion. These drop structures maintain the velocity of the Alamo River at about 2 feet per second, making the Alamo River a relatively slow moving river. The flow of the Alamo River at its outlet to the Salton Sea averages about 900 cfs, and constitutes 50% of the total inflow to the Salton Sea. The designated beneficial uses of the Alamo River include:

- Warm Freshwater Habitat (WARM);
- Wildlife Habitat (WILD);
- Preservation of Rare, Threatened, and Endangered Species (RARE);
- Water Contact Recreation (REC I);
- Non-Contract Recreation (REC II); and
- Freshwater Replenishment (FRSH).

The Alamo River is impaired by sedimentation/siltation, pesticides, and selenium. The Salton Sea is impaired by nutrients, resulting in highly eutrophic conditions in the Sea. This is of importance due to the fact that the Alamo River constitutes a significant source of nutrients to the Salton Sea.

Staff is currently developing a Sedimentation/Siltation TMDL for the Alamo River. This TMDL seeks to address impairments caused by high sediment loads, insoluble pesticides and nutrients, and DDT breakdown products detected in fish from the Alamo River. Attainment of the TMDL will rely on implementation of management practices designed to control discharges of sediment to the Alamo River. The State Water Resources Control Board is conducting an economic analysis of mitigative action implementation to attain the WQO.

SALTON SEA (Phil Gruenberg)

Staff has reviewed the “Salton Sea Restoration Project Environmental Impact Statement/Environmental Impact Report” and has submitted written comments, which are in general favorable. The recommended alternatives bank rather heavily on the use and performance of an enhanced evaporation system. The system, which has been particularly successful at several African locations, involves spraying Salton Sea water into the atmosphere under pressure – thus dramatically increasing the evaporation rate, and collecting the evaporate in a basin. Disposal of salt would have to follow as the basin fills.

Potential complications to a successful Salton Sea restoration effort will include cost, future freshwater inflow in light of conservation efforts in Imperial Valley and tightening of Colorado River water supplies to California in general, and environmental consequences. However, the consequences of no action appear dismal, at best.